

# झारखण्ड केन्द्रीय विश्विद्यालय, राँची

## CENTRAL UNIVERSITY OF JHARKHAND, RANCHI

(A Central University established by an Act of Parliament in 2009)

Ref. No. CUJ/DEVS/2019-2020/SERB/NB/01/LT/01

Dated: 07/11/2019

### **Subject: Limited Tender Enquiry for Supply and Installation of- Gas Chromatograph System with ECD Detector and Accessories and Kjeldahl Digestion & Distillation System**

Sealed quotations are invited for the supply and installation of Gas Chromatograph System with ECD Detector and Accessories and Kjeldahl Digestion & Distillation System, enclosed in the separate sheet (Annexure I) subject to the terms and conditions given below:

The bidders are requested to read the tender document carefully and ensure compliance with all specifications/instructions herein. The quotations should be addressed to The Principle Investigator, SERB-EEQ Project, Department of Environmental Sciences, Central University of Jharkhand, Ratu-Lohardaga Road, Brambe, Ranchi, 834205 and should be reached on or before **09/12/2019** at 5:00 pm. The Technical and Financial bid will be opened on **12/12/2019** at 11:00 am.

### **TERMS AND CONDITIONS**

1. The Technical and Financial bids should be quoted separately and put in different sealed envelopes marked “**Technical bid**” or “**Financial bid**” as applicable. These separate bids envelopes are to be put in an outer envelope which should also be sealed.
2. The Tender Document for items will be Two - Bid system consisting of **Technical Bid (Annexure - I) and Price Bid (Financial) (Annexure -II)**. The Tender Document will be submitted item-wise in two separate sealed covers clearly mentioning on the envelope the details of items for which Bid is submitted.
3. The Technical Bid and Financial Bid should be duly filled-up. These bids will be opened in **two stages**. The bid containing technical specifications, EMD and eligibility documents will be opened at first stage and if same is found according to required specifications, the bid containing financial offer shall be opened in second stage.
4. The bidders or their authorized representatives may also be present during the opening of the Technical Bid and Financial Bid, if they desire so, at their own expenses.

Note: Price bids of only those bidders will be opened whose technical bids are found suitable by the committee appointed for the purpose.

5. Quotations without any erasures and overwriting must be submitted in sealed cover addressed to The Principle Investigator, SERB-EEQ Project, Department of Environmental Sciences, Central University of Jharkhand, Ratu-Lohardaga Road, Brambe, Ranchi, 834205 super-scribed Tender/Enquiry No. and the due date failing which, quotation may be ignored. Tender/ quotation should be sent through courier, speed post or registered post or by hand only.
6. The rate quoted should be inclusive of all packing, forwarding, sales tax, freight and insurance charges and should remain valid for acceptance for minimum period of three months from the due date of opening of the quotations. The quotation should be CUJ consignee's site basis i.e., Central University of Jharkhand, Ratu-Lohardaga Road, Brambe, Ranchi
7. Manufacture's name of company of origin of materials offered must be clearly specified. Complete details of illustrated literature/ or drawing, in original (not photocopies), if any must be accompany all quotations.
8. The University will not entertain request for revision in prices one quoted for whatever reason after the tenders are opened during the period of contract.
9. Maximum delivery period will be **30 days** from the date of issue of the work order. All goods must be delivered at University Ratu-Lohardaga Road, Brambe, Ranchi free of cost after confirmed order.
10. Full payment will be made within 30 days of the receipt and acceptance after inspection of supplies at destination, quotations containing different payment terms are liable to be ignored.
11. Only Manufacture/Authorized dealer/Firms of repute dealing in terms listed in the quotation having experience in sale and repair/maintenance, need apply.
12. Only latest models of items need to be quoted.
13. It should be mentioned specifically whether quoted includes all taxes and duties and/ or other duties legally leviable and intended to be claimed should be distinctly shown in the tender.
14. CUJ, Brambe is registered with DSIR, Govt. of India and is exempted from Custom / Excise Duty. Exemption Certificate to this effect will be issued by CUJ, Brambe. Hence, Customs/Excise Duty exempted price should be quoted.
15. GST/CST Registration Number and its validity should be indicated. Documentary evidence should be supplied/ attached to the tender documents.

**16. Tender Cost:** A Demand draft of **Rs. 2000/- (Rupees Two Thousand only)** towards non-refundable tender fee, by the way of Demand Draft in favour of **Central University of Jharkhand, Ranchi** should accompany the Technical bid documents. In the absence of tender cost, the tender will not be accepted.

**17. Tender EMD** (Earnest Money Deposit, refundable, and no bank interest will be paid on it): The amount mentioned below for equipment/items in a separate sealed envelope with equipment name by the way of Demand Draft from any scheduled Bank in in favour of Central University of Jharkhand payable at Ranchi. The Tender Document must be enclosed with Earnest Money Deposit otherwise the tender document will be rejected. All the documents must be enclosed in a bigger size envelope super-scribed with the tender number and item name.

<b>Name of the equipment</b>	<b>EMD amount (INR)</b>
Gas Chromatograph System with ECD Detector and Accessories	27,000/-
Kjeldahl Digestion & Distillation System	11,000/-

**18.** A Performance Bank Guarantee equivalent to **5% (five Percent)** of the total cost should be submitted by the Successful bidder. Security may be furnished in the form of an Account Payee Demand Draft/Fixed Deposit Receipt from a Commercial bank or Bank Guarantee from a Commercial bank, in an acceptable form, safeguarding the purchaser's interest in all respects and no bank interest will be paid on Performance security. As scheduled within 21 days from the date of receipt of the purchase order and performance security shall remain valid for a period of sixty days (**60 days**) beyond the date of completion of all contractual obligations of the purchase order including comprehensive maintenance (Inbuilt warranty) period.

**19. Warranty Declaration:** Separate warranty certificate document is required from supplier. Warranty period should be at least 3 years. The annual/comprehensive maintenance (AMC/CMC) for two years excluding warranty period is required. The annual/comprehensive maintenance onsite warranty will commence from the date of the satisfactory installation/commissioning of the equipment against the defect of any manufacturing, workmanship and poor quality of the components.

**20. Installation and training** (should be included in the quoted price): The supplier is required to do the installation and demonstration of the equipment within one month of the arrival of materials at CUJ, Brambe, site of installation. There should be minimum of two visits per year by trained authorized engineers during the warranty period. This is in addition to any emergency breakdown call during the warranty period.

21. All rates shall be indicated both in words and figures. Where there is difference between the rates quoted in words and figure, rate quoted in words will prevail.
22. **Delivery:** The Equipment should be delivered and installed within the period as specified in the purchase order and be ready for use **within 30 days** of the issue of purchase order unless otherwise prescribed.
23. All legal proceedings, if necessity arises to the University may be any of the parties (University or Contractor/Supplier) shall have to be lodged in the courts situated at Ranchi.
24. CUJ reserves the right to change the order quantity or split the orders among multiple vendors without assigning any reason (s) whatsoever. CUJ reserves the right to reject any or all the tenders without assigning any reasons whatsoever.
25. **Eligibility Criteria:** All the participating suppliers/firms or principal manufacturer should meet the following qualifying criteria. The firm should be a registered/authorized supplier for such supplies. Following documents are required to be submitted with Technical Bid to qualify eligibility criteria:
  - i. GST registration certificate.
  - ii. PAN and TIN/GST number should be mentioned. Supporting documents for Income Tax return for the last two years (i.e., 2017-18 and 2018-19)
  - iii. 3 years of experience in the relevant field.
26. Details specifications of the equipment are mentioned in **Annexure-II**.
27. A certificate shall be submitted at the time of delivery of the equipment/store on the Letter Head of the successful bidder/supplier as per **Annexure III** of the tender.
28. In case the bidders require any clarification regarding the tender documents, they are requested to contact via e-mail: nirmalibordoloi12@gmail.com

**NIRMALI BORDOLOI**  
**(Principal Investigator, SERB-EEQ Project)**  
**Annexure –I**

**झारखण्ड केन्द्रीय विश्विद्यालय, राँची**  
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**TECHNICAL BID**

The Tenderer must submit the following information against every serial number as under:-

**General Particulars to be provided by the Tenderer (The bidder should provide the following particulars along with relevant supporting documentation)**

1. Name of the Bidder/Partner/Firm: .....
2. Mailing address with contact Number.....
3. Name of the Proprietor.....
4. (i) Tel. No.:.....(ii) Mobile No:.....  
(iii) Fax No.: ..... (iv) E-mail address: .....
5. Whether the firm registered firm (Yes/No), if Yes please mentioned registration no. ....  
(i) VAT No.: .....(ii) TIN Number: .....(iii)PAN No.: .....
6. Name and designation of the person authorized to make commitments to CUJ, Brambe,Ranchi  
.....
7. Year of establishment of firm. ....
8. Whether the firm has enclosed the Bank Draft/Pay Order/ Banker's Cheque as EMD .....
9. Whether the Firm/Agency has signed each and every page of Tender/NIT (Yes/No) .....
10. Any other information, if necessary.....

Place: .....

Name: .....

Date: .....

Business Address: .....

Signature of Bidder: .....

Seal of the Bidder:

**Annexure-II**

झारखण्ड केन्द्रीय विश्विद्यालय, राँची  
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**PRICE-BID**

**For Gas Chromatograph System with ECD Detector and Accessories**

Item name	Generalized Specifications	Quantity	Price (INR)
<b>Gas Chromatograph System with ECD Detector and Accessories</b>	<p>Microprocessor based Gas Chromatography system for analysis of environmental samples /chlorinated Pesticides &amp; N<sub>2</sub>O in trace level by ECD. The system should have automatic/electronic gas control system for all carrier flows/pressure and can be controlled from chromatography management software. User friendly operation to manage the work from LCD Screen with Keypad as when requires. Instrument should be upgradable with TCD, FID, NPD, FPD detectors &amp; to accommodate at least four ionization detectors simultaneously.</p> <p><b>General Specifications (Basic Unit):</b></p> <ul style="list-style-type: none"> <li>• Oven: Stainless Steel size internal dimensions: 17L or more to accommodate at least four columns.</li> <li>• Temperature: 5°C above ambient temperature to 450°C adjustable in step of 1°C.</li> <li>• Temperature Programming: 0.1°C/Min to 50.0°C/Min in steps of 0.1°C/Min. 7 Ramps and 8 Plateaus or more</li> <li>• Time Events: 8 events with On-Off status.</li> <li>• Method Files: 50 or more</li> <li>• Heated Zones: Up to 11 or more</li> <li>• Oven Cool-Down (22 °C ambient): 400 °C to 50 °C in &lt; 6 min or better</li> </ul> <p><b>Performance Specifications</b></p> <ul style="list-style-type: none"> <li>• Typical Retention Time Repeatability: 0.008 min or better</li> <li>• Typical Peak Area Repeatability: &lt;2% RSD or better</li> </ul>	1	

	<p><b>Automatic / Electronic Pressure Control</b></p> <ul style="list-style-type: none"> <li>• Up to 10 channels or more of integrated electronic gas control</li> <li>• Pressure Set Points Minimum Increments: 0.01 psi in all ranges</li> </ul> <p><b>Electronic Carrier Gas Control for Capillary/Packed Column Injector &amp; Auxiliary</b></p> <ul style="list-style-type: none"> <li>• Pressure Range: 0–145 psi or more</li> <li>• Modes: Constant Pressure, Constant Flow and Programmed Pressure</li> </ul> <p><b>Injector</b> - Number of injectors mountable simultaneously: 4(four) or more</p> <p><b>PTV Programmable Temperature Vaporizer with EPC -1 No</b></p> <ul style="list-style-type: none"> <li>• Suitable for all (0.1 mm to 0.53 mm i.d.) capillary columns</li> <li>• Temperature Range: 500C – 4500C with Electronic Pressure Control (EPC)</li> <li>• Constant pressure &amp; constant flow modes</li> <li>• Pressure programming with three ramps and four plateaus</li> <li>• Gas saver mode: Standard</li> <li>• Modes: Split, Splitless and Solvent Split</li> <li>• Carrier Flow Setting: 0.1 ml/min to 100 ml/min</li> <li>• Split Flow Setting: 1 ml/min to 400 ml/min</li> <li>• Purge Flow Setting: 0 to 50 ml/min</li> <li>• Temperature Programming Rate: 10C/min to 6000C/min</li> </ul> <p><b>Electron Capture Detector</b></p> <ul style="list-style-type: none"> <li>• Radioactive Source: 10 mCi, 63Ni or higher</li> <li>• MDL: &lt;1×10<sup>-13</sup> gm/sec. Lindane</li> <li>• Sensitivity: 0.1 pg/sec Lindane or better</li> <li>• Linear Dynamic Range: &gt;10<sup>4</sup> or better</li> <li>• Maximum Temperature: 4000 C or better</li> </ul> <p><b>Column-</b> Capillary Column DB-5/ TG-5MS GC</p>		
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Column 30m x 0.25mm x 0.25um or equivalent column.

**Software**

- Suitable Chromatography Management Software 32/64 bit windows 2000 / XP/7/10 based or latest with PC, Printer to manage the entire work from software should be quoted
- Chromatography data system for control, acquisition, processing, & reporting software.
- Flexible Reporting as user's desires for complete chromatography information Reporting.
- Complete system control with user friendly help & system diagnostic

**Pre – Installation Requisites**

*Desktop Computer Configuration:*

- HP/DEL make : Processor Intel Core i3 7TH Generation Chipset OEM; Memory 8GB DDR3 SDRAM; 1TB Hard Disk Drive; Optical Drive DVD Writer; Ports I/O - (6) USB 2.0 ports, (1) serial port, (1) PS/2, (1) RJ-45, (1) VGA, (1) DVI-D, (1) line in, (1) line out, (1) MIC; Slots (2) full-height PCI slot, (1) full-height PCI-e x1 slots, (1) full-height PCI-e x16 Slot; Graphics On-board; Sound On-board; LAN 1 x 10/100/1000; Monitor HP 18.5" wide screen LED TFT; KBD & Mouse HP; OS Win 7 Professional (License Version) – 64 Bit -1 set
- HP LaserJet Mono Printer Model 1020 Plus or Equivalent -1No
- UHP Grade Nitrogen purity 99.999% with 7M3 of Gas filled in 47ltrs water capacity carbon steel cylinder confirming IS7285 & fitted with IS3224 Valve & Valve Guard with Double Stage SS Diaphragm Pressure Regulator -1 Set
- UHP Grade Hydrogen purity 99.999% with 7M3 of Gas filled in 47ltrs water capacity carbon steel cylinder confirming IS7285 & fitted with IS3224 Valve & Valve Guard with Double Stage



	<p>SS Diaphragm Pressure Regulator -1 Set</p> <ul style="list-style-type: none"> <li>• UHP Grade Zero Air with 7M3 of Gas filled in 47ltrs water capacity carbon steel cylinder confirming IS7285 &amp; fitted with IS3224 Valve &amp; Valve Guard with Double Stage SS Diaphragm Pressure Regulator</li> <li>• Gas Purification Panel for all Gases with Moisture, Hydrocarbon &amp; dedicated Oxygen filter for carrier gas and suitable lining set up -1 Set</li> <li>• Branded UPS: 5KVA true online UPS System having 1phase input &amp; 1phase output, with inbuilt isolation transformer</li> <li>• Calibration Standard for Nitrous Oxide 0.5ltrs Water Capacity with needle valve -1No</li> </ul>		
<b>(A) Rate Quoted for Gas Chromatograph System with ECD Detector and Accessories (in Rs.)</b>			
Cost of the instrument (Include all mentioned accessories)			
FOB			
Packaging and Handling			
Shipping charges			
Insurance			
All taxes			
<b>Total cost of the instruments at destination (CUJ, Ranchi)</b>			
<b>(B) Cost of Comprehensive Maintenance of Contract after inbuilt warranty (In Rs.)</b>			
1 year			
2 year			
3 year			

Place: .....

Name: .....

Date: .....

Business Address: .....

.....

Signature of Bidder: .....

Seal of the Bidder:

**For Kjeldahl Digestion & Distillation System in the Department of Environment Sciences**

Item name	Generalized Specifications	Quantity	Price (INR)
<p><b>Kjeldahl Digestion &amp; Distillation System</b></p>	<p><b>DISTILLATION UNIT</b></p> <ul style="list-style-type: none"> <li>• Distillation Unit for analysis of Kjeldahl Nitrogen, Protein Nitrogen, Nitric Nitrogen (after reduction), Phenols, Volatile Fatty Acids, Cyanides, Sulphur Dioxide, Alcohol content etc.</li> <li>• Automatic distillation</li> <li>• Digital LCD display</li> <li>• Patented maintenance free steam generator</li> <li>• Patented innovative condenser</li> <li>• Automated alkali addition</li> <li>• Microprocessor controlled enabling to pre-program alkali addition</li> <li>• Water saving facility incorporated</li> <li>• in accordance with (AOAC, EPA, DIN, ISO) to simplify validation.</li> <li>• Safely features for operator safety like safety door and tube in place safety.</li> <li>• Alkali resistant Technopolymer splash head for long lifetime.</li> </ul> <p><i>Housing:</i> Corrosion-resistant Technopolymer  <i>Distillation Time :</i> 5 min to collect 100 ml of distillate  <i>Sodium Hydroxide volume :</i> 0 – 100 ml  <i>Reproducibility (RSD) :</i> ≤ 1%  <i>Recovery:</i> ≥ 99.5% at nitrogen levels between 1-200 mgN  <i>Detection Limit :</i> ≥ 0.1 mg N  <i>Time related to start Devarda Alloy Analysis:</i> -99 min</p> <p><b>DIGESTOR</b>            Heating Block Digestion System with Six place sample position built in built temperature controller an oven temperature protector, user</p>	<p align="center">1</p>	

	<p>definable, time control, LCD display, Thermostat automatic detection and alarm message, complete with Tube Rack, heat shield and exhaust system.</p> <p><i>Temperature range:</i> Ambient to 450 °C(Digital Readout °C &amp; °F )</p> <p><i>Selectable Program:</i> 20 programmes with 4 temperature ramp in each program</p> <p><i>Accuracy:</i> ±0.5°C</p> <p><i>Heating speed:</i> 20 to 450 °C in 30 minutes</p> <p><i>Selectable Time:</i> 001 to 999 minutes</p> <p><i>Exhaust:</i> Water Jet Pump for fume removal</p> <p><i>Safety:</i> 1) Over temperature cut off 2) Damaged Temperature probe-Display visualized and acoustic signals.</p>		
<b>(A) Rate Quoted for Kjeldahl Digestion &amp; Distillation System (in Rs.)</b>			
Cost of the instrument (Include all mentioned accessories)			
FOB			
Packaging and Handling			
Shipping charges			
Insurance			
All taxes			
<b>Total cost of the instruments at destination (CUJ, Ranchi)</b>			
<b>(B) Cost of Comprehensive Maintenance of Contract after inbuilt warranty (In Rs.)</b>			
1 year			
2 year			
3 year			

Place: .....

Name: .....

Date: .....

Business Address: .....

.....

Signature of Bidder: .....

Seal of the Bidder:

**CERTIFICATE**

(The declaration should be furnished by the successful bidder/supplier at the time of delivery of the equipment, on its letter head duly signed by the authorized officer of the successful bidder/supplier after affixing official stamp thereon indicating name and designation of the signatory)

Tender Document ID No: CUJ/DEVS/2019-2020/SERB/NB/01/LT/01

Purchase Order No \_\_\_\_\_ Dated \_\_\_\_\_

**Name of the Equipment** – Gas Chromatograph System with ECD Detector and Accessories (Qty: 01) and Kjeldhal Digestion & Distillation System (Qty: 01)

I/we \_\_\_\_\_ (the successful Bidder/supplier do hereby certify that the equipment/stores sold/ supplied to the purchaser under this contract are new & unused in all respect, of the best quality, workmanship and are strictly in accordance with the specifications and particulars contained/ mentioned in the Purchase Order and terms & conditions related thereto.

I/we \_\_\_\_\_ (the successful Bidder / supplier) further guarantee that the said equipment/stores would continue to conform to the given description and quality aforesaid, for the period of \_\_\_\_\_ years (as mentioned in point no 30 of terms and conditions), from the date of Commissioning of the said equipment/stores in the premises of the purchaser.

I/we further certify that the Comprehensive Maintenance period is inclusive of the in- built warranty in respect of all parts including disposable for wear and tear and breakage of any parts including plastic, rubber and glass parts. The above guarantee/warranty is notwithstanding to the fact that the purchaser may have inspected the equipment/stores and/ or not, within the period of Comprehensive Maintenance/ Warranty.

Signature of the successful Bidder/Supplier

Name:

Designation:

Address:

Official Seal: